

IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

1. (currently amended) A computer system comprising:

a first computer that receives access requests to files from at least one client computer;

a first storage device system that is connected to the first computer and stores file management information;

a second computer that receives access requests to files containing file data from the first computer;

a second storage device system that is connected to the second computer and stores the files containing file data;

a third computer that manages a history of accesses to the files by the at least one client computer and charges fees to users of the at least one client computer for accessing the files based on the history of accesses to the files; and

a network that connects to the at least one client computer, the first computer, ~~and the second computer~~ and the third computer,

wherein upon receiving file data from the at least one client computer, the first computer assigns first identification information to the file data, and stores the file data in the second storage device system through the second computer,

wherein the first storage device system stores the first identification information assigned to the file data by the first computer, and a file name of a

file having the file data designated by the at least one client computer as said file management information,

wherein upon receiving, from the at least one client computer, a write request requesting write access to a file, which is the target of the write request, the first computer searches an open file table, which registers in corresponding relation file names used by the at least one client computer to designate files, first identification information of files that are open, credential information of users of the at least one client computer who can access the files that are open and information that identifies session information which is generated when a session has been established between the at least one client computer and said first computer, to obtain first identification information of the file, causes a determination whether an user of the at least one client computer has authority to execute the write request based on said credential information and said session information, and if the user of the at least one client computer has authority to execute the write request, assigns to write data received from the at least one client computer with the write request second identification information different from the first identification information assigned to the file data of the file stored in the second storage device system,

wherein the first computer stores the write data, through the second computer, in a storage region within the second storage device system that is different from a storage region that stores the file data already stored in the second storage device system, and

wherein the first computer correlates the second identification information to a filename of the file and to the first identification information

and stores the second identification information in the first storage device system.

2. (previously presented) A computer system according to claim 1, wherein the second storage device system includes file containers that store file data, and wherein the write data is stored in a first file container, which is different from a second file container that stores the file data of the file.

3. (currently amended) A computer system according to claim 1, ~~further comprising: a~~ wherein the third computer that receives an access request to a file from the at least one client computer, converts the access request received into an access request according to a protocol that is used by the first computer, and transmits the access request converted to the first computer.

4. (previously presented) A computer system according to claim 1, wherein the second storage device system further includes view data having at least one pair of a file name of a file and identification information of the file,

wherein the first storage device system further includes view management information including storage location of the view data, and

wherein the first computer, upon receiving from the at least one client computer a view data read request, reads the view data from the second

storage device system through the second computer based on the view management information stored in the first storage device system.

5. (previously presented) A computer system according to claim 4, wherein the second storage device system stores the view data correlated with time information, and

wherein the view data includes a pair of a file name of a file corresponding to file data and identification information of the file stored in the second storage device system at a time indicated by the time information correlated with the view data.

6. (original) A computer system according to claim 5, wherein the first computer, upon receiving a creation request to create a new file from the at least one client computer, stores in the second storage device system through the second computer a pair of a file name of the new file created and identification information of the new file and view data having a pair of a file name of another file and identification information of the other file stored in the second storage device system, correlated with time information indicating the time when the new file is created.

7. (original) A computer system according to claim 5, wherein the first computer, upon receiving the write request, stores in the second storage device system through the second computer view data including a pair of the first identification information and the file name and a pair of the second identification information and the file name together with time

information indicating the time when the write data is written in the second storage device system.

8. (previously presented) A computer system according to claim 7, wherein the first computer, upon receiving a view data read request including time information from the at least one client computer, selects time information among the time information correlated to the view data which is older than but latest to the time information included in the view data read request, reads from the second storage device system through the second computer view data correlated to the time information selected, and transmits the view data read to the client computer.

9. (currently amended) A computer system according to claim 1, ~~further comprising: a~~ wherein the third computer that checks if a client computer has an access right to access files, and

wherein the first computer, upon receiving from the at least one client computer a file access request to access a file, transmits an access right request to the third computer, and decides whether or not to execute an access processing for accessing the file according to the file access request sent from the at least one client computer depending on an access right check result received from the third computer.

10. (currently amended) A program, stored on a computer readable storage medium, for executing a file access processing according to a file access request received from at least one client computer, the program

being executed by a computer system including a first computer that receives access requests to files from the at least one client computer, a first storage device system that is connected to the first computer and stores file management information, a second computer that receives an access requests request to files containing file data from the first computer, a second storage device system that is connected to the second computer and stores the files containing the file data, a third computer, and a network that connects to the at least one client computer, the first computer, and the second computer and the third computer, the program comprising:

a code for managing by the third computer a history of accesses to the files by the at least one client computer;

a code for charging by the third computer fees to users of the at least one client computer for accessing the files based on the history of accesses to the files;

a code for assigning by the first computer, upon receiving file data from the at least one client computer, first identification information to the file data;

a code for storing by the second computer the file data received by the first computer from the at least one client computer in the second storage device system;

a code for storing by the first computer in the first storage device system the first identification information assigned to the file data by the first computer, and a file name of a file having the file data designated by the at least one client computer as said file management information;

a code for receiving, from the at least one client computer, by the first computer a write request requesting write access to a file which is the target

of the write request;

a code for searching an open file table, which registers in corresponding relation file names used by the at least one client computer to designate files and first identification information of files that are open, credential information of users of the at least one client computer who can access the files that are open and information that identifies session information which is generated when a session has been established between the at least one client computer and said first computer, to obtain first identification information of the file, causing a determination whether an user of the at least one client computer has authority to execute the write request based on said credential information and said session information, and if the user of the at least one client computer has authority to execute the write request, assigning by the first computer to write data received from the at least one client computer with the write request second identification information different from the first identification information assigned to the file data of the file stored in the second storage device system;

a code for storing by the first computer the write data in the second storage device system; and

a code for correlating by the first computer the second identification information to the filename of the file and to the first identification information and storing the second identification information in the first storage device system.

11. (original) A program according to claim 10, wherein the second storage device system includes file containers that store file data,

wherein the code for storing the write data in the second storage device system includes a code for storing the write data in a file container, which is different from a file container that stores the file data of the file.

12. (currently amended) A program according to claim 10, wherein ~~the computer system further includes a third computer connected to the network, wherein the~~ program includes a code for receiving by the third computer an access request to a file from the at least one client computer, converting the access request received into an access request according to a protocol that is used by the first computer, and transmitting the access request converted to the first computer.

13. (currently amended) A program according to claim 10, further comprising:

- a code for storing by the second storage device system view data having at least one pair of a file mime of a file and identification information of the file;

- a code for storing by the first storage device system view management information including storage location of the view data; and

- a code for receiving by the first computer from the at least one client computer a view data read request; and

- a code for reading by the first computer the view data from the second storage device system through the second computer based on the view management information stored in the first storage device system.

14. (original) A program according to claim 13, wherein the code for storing by the second storage device system the view data includes a code for correlating the view data with time information, and the view data includes a pair of a file name of a file corresponding to file data and identification information of the file stored in the second storage device system at a time indicated by the time information correlated with the view data.

15. (previously presented) A program according to claim 14, further comprising:

a code for, upon receiving a creation request to create a new file from the at least one client computer, storing by the first computer in the second storage device system through the second computer a pair of a file name of the new file created and identification information of the new file and view data having a pair of a file name of another file and identification information of the other file stored in the second storage device system, correlated with time information indicating the time when the new file is created.

16. (previously presented) A program according to claim 14, further comprising:

a code for, upon receiving the write request, storing by the first computer in the second storage device system through the second computer view data including a pair of the first identification information and the file name and a pair of the second identification information and the file name together with time information indicating the time when the write data is written in the second storage device system.

17. (previously presented) A program according to claim 16, further comprising:

a code for, upon receiving a view data read request including time information from the at least one client computer, selecting by the first computer time information among the time information correlated to the view data which is older than but latest to the time information included in the view data read request, reading from the second storage device system through the second computer view data correlated to the time information selected, and transmitting the view data read to the at least one client computer.

18. (currently amended)A program according to claim 10, wherein ~~the computer system further includes a third computer that checks if the at~~ least one client computer has an access right to access files, and further comprising a code for, upon receiving from the at least one client computer a file access request to access a file, transmitting by the first computer an access right check request to the third computer, and deciding whether or not to execute an access processing for accessing the file according to the file access request sent from the at least one client computer depending on an access right check result received from the third computer.

19. (currently amended)A file access method executed by a computer system, the computer system including a first computer that receives access requests to files from at least one client computer, a first storage device system that is connected to the first computer and stores file

management information, a second computer that receives an access request to files containing file data from the first computer, a second storage device system that is connected to the second computer and stores the files containing the file data, a third computer, and a network that connects to the at least one client computer, the first computer, ~~and the second computer~~ and the third computer, wherein the second storage device system includes file containers for storing the file data,

the method comprising the steps of:

managing by the third computer a history of accesses to the files by the at least one client computer;

charging by the third computer fees to users of the at least one client computer for accessing the files based on the history of accesses to the files;

receiving, from at least one client computer, by the first computer a write request requesting write access to a file which is the target of the write request;

searching an open file table, which registers in corresponding relation file names used by the at least one client computer to designate files, first identification information of files that are open, credential information of users of the at least one client computer who can access the files that are open and information that identifies session information which is generated when a session has been established between the at least one client computer and said first computer, to obtain first identification information of the file, causing a determination whether an user of the at least one client computer has authority to execute the write request based on said credential information and said session information, and if the user of the at least one client

computer has authority to execute the write request, assigning by the first computer to write data received from the at least one client computer with the write request second identification information different from first identification information assigned by the first computer to file data of the file stored in the second storage device system;

storing by the second computer the write data in a file container different from a file container that stores the file data of the file; and

correlating by the first computer the second identification information to the filename of the file and to the first identification information and storing the second identification information in the first storage device system.

20. (currently amended)A file access method according to claim 19, wherein the ~~computer system further includes a third computer to~~executes ~~execute-protocol conversion, and~~

said method further comprising a~~steps~~ step-of:

receiving by the third computer an access request to a file from at least one client computer, and

~~a step-of~~ converting the access request received into an access request according to a protocol that is used by the first computer, and transmitting the access request converted to the first computer.

21. (currently amended)A file access method comprising the steps of:

a first computer that receives file data from at least one client computer;

a first storage device system that is connected to the first computer and stores file management information;

a second computer that receives an access request to files containing file data from the first computer;

a second storage device system that is connected to the second computer and stores the files containing the file data;

a third computer; and

a network that is connected to the at least one client computer, the first computer, ~~and the second computer~~ and the third computer,

the method comprising the steps of:

managing by the third computer a history of accesses to the files by the at least one client computer;

charging by the third computer fees to users of the at least one client computer for accessing the files based on the history of accesses to the files;

receiving by the first computer file data from the at least one client computer;

assigning by the first computer first identification information to the file data;

storing by the first computer in the first storage device system the first identification information and a file name of a file having the file data designated by the at least one client computer;

storing by the second computer the file data in the second storage device system;

receiving, from the at least one client computer, by the first computer a write request requesting write access to a file which is the target of the write

request;

searching an open file table, which registers in corresponding relation file names used by the at least one client computer to designate files, first identification information of files that are open, credential information of users of the at least one client computer who can access the files that are open and information that identifies session information which is generated when a session has been established between the at least one client computer and said first computer, to obtain first identification information of the file;

causing a determination whether an user of the at least one client computer has authority to execute the write request based on said credential information and said session information;

if the user of the at least one client computer has authority to execute the write request, assigning by the first computer to the file data second identification information different from the first identification information assigned to the file data of the file stored in the second storage device system;

storing by the first computer the file data in the second storage device system;

correlating by the first computer the second identification information to the filename of the file and to the first identification information; and

storing by the first computer the second identification information in the first storage device system.

Claim 22 (canceled).